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(54) **GENETIC MARKERS FOR DIAGNOSIS OF TUBERCULOSIS CAUSED BY MYCOBACTERIUM TUBERCULOSIS**

(57) The application is related to novel signature sequences for diagnosis of *Mycobacterium tuberculosis* in clinical samples with 100% specificity and a very high degree of sensitivity.

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EUROPEAN SEARCH REPORT

Application Number
EP 18 15 9299

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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Y	PROTILLO DEL P ET AL: "AMPLIFICATION OF A SPECIES-SPECIFIC DNA FRAGMENT OF MYCOBACTERIUM TUBERCULOSIS AND ITS POSSIBLE USE IN DIAGNOSIS", JOURNAL OF CLINICAL MICROBIO, AMERICAN SOCIETY FOR MICROBIOLOGY, US, vol. 29, no. 10, 1 October 2001 (2001-10-01), pages 2163-2168, XP009004071, ISSN: 0095-1137 * abstract; page 2163 "Material and Methods"; Fig. 3 and 4 *	2-6	TECHNICAL FIELDS SEARCHED (IPC) C12Q
Y	Sarman Singh ET AL: "Nontuberculous mycobacterial infections in Indian AIDS patients detected by a novel set of ESAT-6 polymerase chain reaction primers", Japanese journal of infectious diseases, 1 February 2007 (2007-02-01), pages 14-18, XP055483477, Japan Retrieved from the Internet: URL:http://www0.nih.go.jp/JJID/60/14.pdf [retrieved on 2018-06-12] * abstract; page 15, left col.; Fig. 1; page 16, bottom of left col. *	2-6	
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 17 September 2018	Examiner Leber, Thomas
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

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 Application Number
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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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X	WO 2011/148269 A2 (NAT UNIV IRELAND [IE]; REDDINGTON KATE MARY [IE]; BARRY THOMAS GERARD) 1 December 2011 (2011-12-01) * claims 1-14; Figs. 1-4 *	2-6	
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The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 17 September 2018	Examiner Leber, Thomas
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

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CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing claims for which payment was due.

☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):

☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

☒ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.

☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.

☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:

☐ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:

☐ The present supplementary European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims (Rule 164 (1) EPC).

**LACK OF UNITY OF INVENTION
SHEET B**

Application Number

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The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1-6(partially)

Target sequence, method and kit characterised by SEQ ID NO:1
for exclusive detection of M. tuberculosis over many other
mycobacterial species.

2. claims: 1-6(partially)

Target sequence, method and kit characterised by SEQ ID NO:2
for exclusive detection of M. tuberculosis over many other
mycobacterial species.

3. claims: 1-6(partially)

Target sequence, method and kit characterised by SEQ ID NO:3
for exclusive detection of M. tuberculosis over many other
mycobacterial species.

4. claims: 1-6(partially)

Target sequence, method and kit characterised by SEQ ID NO:4
for exclusive detection of M. tuberculosis over many other
mycobacterial species.

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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